

# SPECIFICATIONS

## General

FREQUENCY RESOLUTION	: AM/FM/SSB ,10KHz STEP
FREQUENCY RANGE	: 26.965 - 27.405MHz
Semiconductors	: 74 Transistors, 70 Diodes, 8 ICs, 1 FET, 1 LCD.
Crystals	: 3
Microphone	: c-Mic Type
Speaker	: 8 ohm 2W
Antenna Connector	: M Type
Jacks & Connectors	: Mic(6P), EXT.SP(3.5 dia.), DC Power (2P)
Controls	: Channel Selector, Mode Switch (USB-AM-LSB-FM), MB Switch, Power ON/OFF-Volume Control, Clarifier, SQUELCH, Control, RF GAIN Control, MIC GAIN Control, SCAN Switch, LCR Switch, M-LOAD Switch, M-SAVE Switch, FUNC Switch, TONE-LOW Switch, Ch9 Switch, RF power volume.
Meter	: S/RF Power Meter (5 Dots LCD BAR)
Indicators	: Channel Frequency Indicator, TX Indicator, NB Indicator FUNC Indicator, USB, AM, LSB, FM Indicator SCAN Indicator, LOW Indicator,
Accessories	: Microphone, Hanger, Mounting Bracket, DC power cord with in-fuse

# MEASUREMENT CONDITIONS (90% Population)

Power Source	:	13.8V (DC)
Antenna Impedance	:	50 ohm
Test Temperature	:	77°F (25°C)
AM/FM Modulation Frequency	:	1kHz
SSB Modulation Frequency, Transmit	:	Two Tones : 500 Hz & 2400 Hz Single Tone : 1 kHz
Min Signal Input Level	:	1000uV
Reference Audio Output Power	:	0.5 W
Reference AM Modulation Percentahe	:	1 kHz 30%
Audio Frequency, SSB Receive	:	1 kHz
Audio Output Lode	:	8 ohm resistive

## TRANSMITTER SECTION

ITEMS		Unit	Nominal	Limit
Frequency Tolerance at 77°F (25°C)	AM	%	±0.0005	±0.003
(5 Minutes after switch on)	FM	%	±0.0005	±0.003
	SSB	%	±0.0005	±0.003
Carrier Power at No Modulation	AM	W	4	3.6-4.4
	FM	W PEP	4	3.6-4.4
PEP Power, Single Tones,	SSB	W PEP	4	3.6-4.4
Modulation Distortion at 1 kHz,				
50% Modulation	AM	%	3	8
1.2kHz DEVIATION	FM	%	3	8
Spurious Harmonic Suppression	AM	dBm	-54	-36
( 47-69MHz,      87-118MHz,	FM	dBm	-54	-36
174-230MHz,    470-862MHz. )	SSB	dBm	-54	-36
Carrier Suppression	SSB	dBm	-54	-36
Unwanted Sideband Suppression				
(at 2500 Hz 1W PEP 16 dB up)	SSB	dB	-55	-40
Current Drain at No Modulation	AM	mA	2000	2500
	FM	mA	3000	3500
	SSB	mA	3000	3500
Current Drain				
AM: Max Mod.		mA	2500	3500
FM: Max Mod.		mA	2500	3500
SSB: Max Watt PEP, Two Tones		mA	2500	3500
Modulation Frequency Response				
( 1 kHz, 0 dB Reference)				
Lower Frequency	AM	Hz	450	250-650
	FM	Hz	450	250-650
	SSB	Hz	450	250-650
Upper Frequency	AM	Hz	2500	1500-4000
	FM	Hz	2500	1500-4000
	SSB	Hz	3500	1500-5000
Carrier Power Uniformity, CH to CH				
at No Modulation	AM	W	0.5	1
	FM	W	0.5	1
Mic Input Level Uniformity, CH to				
CH for 4 watts Output 2.5 kHz				
Single Tone-SSB	SSB	dB	2	3
Mic Input Level Uniformity, LSB to				
USB for 10 watts Output, 1.5 kHz				
Single Tone		dB	1	3

ITEMS	Unit	Nominal	Limit
Microphone Sensitivity			
AM: For 50% Mod.	mV	1.5	6
FM: For 1kHz DEV.	mV	1.5	6
SSB: For 4W P.E.P.	mV	1.5	6
AMC Range			
AM: 50-100% Mod.	dB	50	40
FM: 1.5-2kHz DEV.	dB	50	40
SSB: 25-30 Watts PEP	dB	50	40
Modulation Capability AM	%	95	80-100
Modulation Attack Time	m Sec	20	25
Modulation Release Time	m Sec	250	100-500
RF Meter (S-9) Indication			
2.5 kHz Single Tone	SSB W	3.8	2.5-4

# RECEIVER SECTION

ITEMS		Unit	Nominal	Limit
(ANL & Noise Blanker Switch Off)				
Max sensitivity	AM	uV	0.5	1
	FM	uV	0.25	0.5
	SSB	uV	0.25	0.5
Sensitivity for 10 dB S/N	AM	uV	0.5	1
	FM	uV	0.25	0.16
	SSB	uV	0.25	0.16
AGC Figure of Merit 100mV for	AM	dB	90	80
10 dB Change in Audio Output	SSB	dB	90	80
Overload AGC Characteristics	AM	dB	±3	±6
from 100mV to 1000mV	SSB	dB	±3	±6
Overall Audio Fidelity at 6 dB Down				
Upper Frequency	AM	Hz	2000	1500-3000
	FM	Hz	2000	1500-3000
	SSB	Hz	3500	2500-5000
Lower Frequency	AM	Hz	400	300-600
	FM	Hz	400	300-600
	SSB	Hz	450	250-650
Cross Modulations, RS Standard	AM	dB	60	50
	FM	dB	60	50
Adjacent Channel Selectivity ±10 kHz	AM	dB	60	50
	FM	dB	60	50
	SSB	dB	70	60
Maximum Audio Output Power	AM	W	2.5	2
	FM	W	2.5	2
	SSB	W	2.5	2
Audio Output Power at 10% THD	AM	W	1.5	1
	FM	W	1.5	1
	SSB	W	1.5	1
THD at 500mW Audio Output				
AM: 1mV Input, 30%		%	3	10
80%		%	5	10
FM: 1mV Input, 1kHz DEV.		%	5	10
SSB: 1mV Input 1kHz Single Tone		%	3	10
RF Gain Control Range at Max	AM	dB	40	30-60
Sensitivity Level	FM	dB	40	30-60
	SSB	dB	40	30-60

ITEMS		Unit	Nominal	Limit
S/N Ratio at Input 1mV	AM	dB	40	34
	FM	dB	40	34
	SSB	dB	40	34
Squelch Sensitivity at Threshold	AM	uV	0.6	1.3
	FM	uV	0.6	1.3
	SSB	uV	0.6	1.3
Squelch Sensitivity at Tight	AM	uV	1000	320-3200
	FM	uV	1000	320-3200
	SSB	uV	1000	320-3200
Skirt Rejection ( $\pm 20$ kHz)	AM	dB	70	60
	FM	dB	70	60
	SSB	dB	70	60
S Meter Sensitivity at "S-9" (No Modulation AM)	AM	uV	100	30-320
	FM	uV	100	30-320
	SSB	uV	100	30-320
Image Rejection Ratio ( $f_o - 2 \times 10.695 \text{ MHz}/2$ )	AM	dB	76	66
	FM	dB	76	66
	SSB	dB	76	66
1/2 IF Rejection Ratio ( $f_o - 10.695 \text{ MHz}/2$ )	AM	dB	80	70
	FM	dB	80	70
	SSB	dB	80	70
SSB Adjacent Sideband Rejection	SSB	dB	60	40
IF Rejection Ratio 10.695 MHz	AM	dB	70	60
	FM	dB	70	60
	SSB	dB	70	60
Oscillator Dropout Voltage	AM	V	9	11
	FM	V	9	11
	SSB	V	9	11
Current Drain at No Signal	AM	mA	400	500
	FM	mA	400	500
	SSB	mA	400	500
Current Drain at Maximum Audio Output Power	AM	mA	600	1000
	FM	mA	600	1000
	SSB	mA	600	1000
Clarifier Range	AM	kHz	$\pm 1.5$	$\pm 0.8 - \pm 3.0$
	FM	kHz	$\pm 1.5$	$\pm 0.8 - \pm 3.0$
	SSB	kHz	$\pm 1.5$	$\pm 0.8 - \pm 3.0$
Spurious Rejection Ratio In Band	AM	dB	65	56
	FM	dB	65	56

ITEMS		Unit	Nominal	Limit
Out of Band	SSB	dB	65	56
	AM	dB	60	50
	FM	dB	60	50
NB Performance	SSB	dB	60	50
	AM	dB	30	20
	FM	dB	30	20
NB Loss	SSB	dB	25	16
	AM	dB	-4	-6
	FM	dB	-4	-6
Dynamic Range	SSB	dB	0	-6
	SSB	dB	65	60